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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,179

10/05/2005

Marcus J Seewald

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08/31/2010

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EXAMINER

GWARTNEY, ELIZABETH A

ART UNIT

PAPER NUMBER

1781

NOTIFICATION DATE

DELIVERY MODE

08/31/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomail@panitchlaw.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/542,179	<b>Applicant(s)</b> SEEWALD, MARCUS J	
	<b>Examiner</b> ELIZABETH GWARTNEY	<b>Art Unit</b> 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20100408</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 8, 2010 has been entered.
2. Claims 19-21 have been added. Claims 1-21 are pending.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regards to claim 19, the recitation "wherein the acceleration amounts to a reduction of maturing time of more than 50%" renders the claim indefinite because it is not clear what the maturation time is being measured against.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 1781

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 5-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson ("Fermented Meat Products" in Encyclopedia of Food Microbiology) in view of Shankman et al. ("Vitamin Requirements of Twenty-three Lactic Acid Bacteria") and Snell ("The Nutritional Requirements of the Lactic Acid Bacteria and Their Application to Biochemical Research").

Regarding claims 5-7, 9-10, 18 and 19, discloses a method of making a semi-dry sausage, comprising the steps of providing minced beef, pork and pork fat, mixing the minced meat with additives including pepper, garlic, sugar, and cardamom, stuffing the mixture into natural or artificial casings, and fermenting the sausage for 9-23 days at a relative humidity of 58 - 95% and a temperature of 12-30° C (p. 744/Manufacture of Fermented Sausages/P1, p. 747/Table 1/Dry Sausage). Robinson discloses that the desired sensory characteristics of the fermented sausage products are associated with the dominance of lactic acid bacteria, which contribute to the inhibition of the spoilage and pathogenic bacteria (p.745/Desirable Flora). Robinson also discloses that lactic acid bacteria are commonly used in starter cultures (p.745/Starter Cultures for Fermented Sausages).

Art Unit: 1781

While Robinson discloses the addition of additives, the reference does not explicitly disclose adding from about 4 mg. to about 25 mg. per kilogram of meat a material selected from the group consisting of folic acid and folate.

Shankman et al. teach that folic acid is known to be stimulatory or essential for growth of lactic acid bacteria such as *L. delbruckii* and *L. casei* (p.29/Table III). Snell teaches that lactic acid bacteria require complex media for rapid growth including folic acid (p.373/L1-3, p. 378/Table 2). Snell teaches that folic acid is a vitamin for lactic acid bacteria (p. 380/L16-17).

Robinson, Shankman et al. and Snell are combinable because they are concerned with the same field of endeavor, namely, lactic acid bacteria. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added a folic acid containing media as taught by Shankman et al. and Snell, to the raw sausage meat of Robinson for the purpose of encouraging rapid growth of desired lactic acid bacteria during maturation.

While the present claims require an addition of about 4 mg to about 25 mg per kilogram of raw sausage meat, Shankman et al. and Snell provide little guidance as to how much of each media component, including folic acid, is required for rapid growth or maturation, i.e. fermentation. Given folic acid is a known stimulator or essential for growth component of lactic acid bacteria, one of ordinary skill in the art would have found it obvious to adjust, by routine processing, the amount of folic acid added to stimulate growth and fermentation of the lactic acid bacteria.

Given modified Robinson discloses a method substantially similar to that presently claimed, it follows that the microbiological maturing process time would be reduced by a time of more than 50%.

Art Unit: 1781

Regarding claim 8, modified Robinson discloses all of the claim limitations as set forth above but the reference does not disclose that the material is added in a substantially uniform distribution during the step of adding spice. A skilled artisan would know to add ingredients to a food mixture in a uniform distribution in order to produce a homogenous product. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added the material to the sausage of Robinson in a uniform distribution for the purpose of making a product homogenous in flavor, texture and nutritional value.

Regarding claim 11, modified Robinson discloses all of the claim limitations as set forth above but the reference fails to disclose the step of washing the sausage in water. A skilled artisan would know to wash a stuffed sausage product prior to ripening in order to remove undesirable bacteria and debris. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have washed the sausage of modified Robinson with water to remove undesirable debris and prevent contamination for undesirable bacteria, yeast, and molds.

Regarding claim 12, modified Robinson discloses all of the claim limitations as set forth above and that yeast and molds commonly develop on the surface of the fermented sausage during ripening (p. 745/Manufacture of Fermented Sausages/P2). Further, Robinson discloses that to ensure reliability of the quality of fermented meat products, starter cultures are used (p. 745/Desirable Flora/P3). As starter cultures, molds such as *Penicillium nalgioense*, *P. chrysogenum* or *P. camemberti* are added to the surface of the sausage casing (p. 746/Starter Cultures for Fermented Sausages/P1). While Robinson does not explicitly disclose that the mold is dissolved in water, it would have been obvious to one of ordinary skill in the art at the time of

Art Unit: 1781

the invention to have treated the exterior of the sausage with a mold starter culture dissolved in water to ensure an even distribution of the culture over the exterior of the entire sausage casing.

Regarding claims 13-17, modified Robinson discloses all of the claim limitations as set forth above. Robinson also discloses storing the sausage for 9-23 days with an initial 18-48 hours at 58-95% humidity and a temperature of 20-30°C and thereafter stored at a relative humidity of 75-80% and a temperature of 12-15°C (p. 747/Table 1/Dry sausage).

While Robinson discloses storing the sausage for a total of 9-24 days with a 48 hour period of fermentation at a relative humidity of 58-95% and a temperature of 20-30°C (p. 747/Table 1/Dry sausage), the reference does not disclose a period of fermentation lasting 3 days or an additional two days at a relative humidity of about 88% and temperature of 22°C.

As flavor intensity, flavor character and fermentation rate are variables that can be modified, among others, by adjusting the time, humidity and temperature of sausage storage within the range disclosed by Robinson, the precise storage time, humidity, and temperature would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, storage time, humidity and temperature cannot be considered critical within the range disclosed by Robinson. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized by routine experimentation the time, humidity, and temperature of each phase of sausage storage to obtain the desired balance between fermentation rate and flavor intensity and character. (In *re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In *re Aller*, 105 USPQ 223).

Art Unit: 1781

Regarding claim 20, modified Robinson discloses all of the claim limitations as set forth above. Robinson also discloses that after stuffing, the products are fermented and air-dried (i.e. matured – *see* Fermentation and drying constitute ripening, p. 744/Manufacture of Fermented Sausages).

Regarding claim 21, modified Robinson et al. disclose all of the claim limitations as set forth above. While Robinson discloses the use of starter cultures in the preparation of fermented sausages, Robinson does not disclose that starter cultures are required. Further, Robinson discloses that raw meat mixtures are naturally contaminated with microorganisms including *Lactobacillus* and *Micrococcus* species (p.745/Microbiology of Fermentation). Robinson discloses that species of *Lactobaccillus* including *L. sakei*, *L. plantarum*, *L. viridescens*, and *L. curvatus* are present naturally and the dominant bacterial flora during fermentation (p.745/Desirable Flora).

8. Claims 5-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson (“Fermented Meat Products” in Encyclopedia of Food Microbiology) in view of Henry et al. (“Nutrition Handbook for Food Processers – Section 8.6-Nutritional enhancement versus food fortification.”) and Rader (“Folic Acid Fortification, Folate Status, and Plasma Homocysteine”) and further as evidenced by Kerry et al. (“Quality control of fermented meat products” in Meat Processing-Improving Quality).

Regarding claims 5-7, 9-10, 18 and 19, Robinson discloses a method of making a semi-dry sausage, comprising the steps of providing minced beef, pork and pork fat, mixing the minced meat with additives including pepper, garlic, sugar, and cardamom, stuffing the mixture



Art Unit: 1781

into natural or artificial casings, and storing the sausage for 9-23 days at a relative humidity of 58 - 95% and a temperature of 12-30° C (p. 744/Manufacture of Fermented Sausages/P1, p. 747/Table 1/Dry Sausage)

While Robinson discloses the addition of additives, the reference does not explicitly disclose adding from about 4 mg. to about 25 mg. per kilogram of meat a material selected from the group consisting of folic acid and folate.

Rader teaches that folic acid is a known nutritive additive in foods (Abstract). Rader teaches that folic acid fortification of food is intended to increase intake of folic acid among humans and reduce the risk of a pregnancy affected by a neural tube birth defect (NTD) and vascular disease (Abstract). Rader teaches that the addition of folic acid to enriched cereal-grain products became mandatory in the U.S. on January 1, 1998 at a level of 140 µg folic acid/100 g cereal-grain product (p. 2466S/Introduction).

Henry et al. teaches that folates have the effect of reducing the levels of plasma homocysteine (p.202/Section 8.6/lines 10-11). Henry et al. teaches that increased plasma homocysteine levels are a risk factor for cardiovascular disease and stroke (p.202/Section 8.6, lines 10-13). Further, Henry et al. teaches that to achieve the ideal level of plasma homocysteine, dietary levels of folate would have to increase from the current average of 200 µg/day to 600 µg/day (p.203/Section 8.6/line 11).

Given that the improvement of the nutritional value of meat products has been tried for years (as evidenced by Kerry et al. - p. 382/Section 18.9.2), it would have been obvious to one of ordinary skill in the art to fortify the semi-dry sausage of Robinson with folic acid or folate, as

Art Unit: 1781

taught by Rader and Hendry et al.. A skilled artisan would do so in order to increase the intake of folic acid or folate acid and reduce the risk of NTD-pregnancies and vascular disease.

While Rader teaches that folic acid is added to cereal-grain at a level of 140 µg folic acid/100 g, Henry et al. teaches that dietary levels of folate should be 600 µg/day. As presently claimed, one serving of 100 grams of sausage would comprise 400 to 2500 µg folic acid or folate (wherein 4mg to 25 mg of folic acid or folate are added per kilogram of raw sausage meat). Clearly, the recommended daily intake of folic acid or folate falls within in the claimed enrichment.

Given modified Robinson discloses a method substantially similar to that presently claimed, it follows that the microbiological maturing process time would be reduced by a time of more than 50%.

Regarding claim 8, modified Robinson discloses all of the claim limitations as set forth above but the reference does not disclose that the material is added in a substantially uniform distribution during the step of adding spice. A skilled artisan would know to add ingredients to a food mixture in a uniform distribution in order to produce a homogenous product. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added the material to the sausage of Robinson in a uniform distribution for the purpose of making a product homogenous in flavor, texture and nutritional value.

Regarding claim 11, modified Robinson discloses all of the claim limitations as set forth above but the reference fails to disclose the step of washing the sausage in water. A skilled artisan would know to wash a stuffed sausage product prior to ripening in order to remove undesirable bacteria and debris. Therefore, it would have been obvious to one of ordinary skill

Art Unit: 1781

in the art at the time the invention was made to have washed the sausage of modified Robinson with water to remove undesirable debris and prevent contamination for undesirable bacteria, yeast, and molds.

Regarding claim 12, modified Robinson discloses all of the claim limitations as set forth above and that yeast and molds commonly develop on the surface of the fermented sausage during ripening (p. 745/Manufacture of Fermented Sausages/P2). Further, Robinson discloses that to ensure reliability of the quality of fermented meat products, starter cultures are used (p. 745/Desirable Flora/P3). As starter cultures, molds such as *Penicillium nalviogense*, *P. chrysogenum* or *P. camemberti* are added to the surface of the sausage casing (p. 746/Starter Cultures for Fermented Sausages/P1). While Robinson does not explicitly disclose that the mold is dissolved in water, it would have been obvious to one of ordinary skill in the art at the time of the invention to have treated the exterior of the sausage with a mold starter culture dissolved in water to ensure an even distribution of the culture over the exterior of the entire sausage casing.

Regarding claims 13-17, modified Robinson discloses all of the claim limitations as set forth above. Robinson also discloses storing the sausage for 9-23 days with an initial 18-48 hours at 58-95% humidity and a temperature of 20-30°C and thereafter stored at a relative humidity of 75-80% and a temperature of 12-15°C (p. 747/Table 1/Dry sausage).

While Robinson discloses storing the sausage for a total of 9-24 days with a 48 hour period of fermentation at a relative humidity of 58-95% and a temperature of 20-30°C (p. 747/Table 1/Dry sausage), the reference does not disclose a period of fermentation lasting 3 days or an additional two days at a relative humidity of about 88% and temperature of 22°C.

Art Unit: 1781

As flavor intensity, flavor character and fermentation rate are variables that can be modified, among others, by adjusting the time, humidity and temperature of sausage storage within the range disclosed by Robinson, the precise storage time, humidity, and temperature would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, storage time, humidity and temperature cannot be considered critical within the range disclosed by Robinson. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized by routine experimentation the time, humidity, and temperature of each phase of sausage storage to obtain the desired balance between fermentation rate and flavor intensity and character. (In *re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In *re Aller*, 105 USPQ 223).

Regarding claim 20, modified Robinson discloses all of the claim limitations as set forth above. Robinson also discloses that after stuffing, the products are fermented and air-dried (i.e. matured – see Fermentation and drying constitute ripening, p. 744/Manufacture of Fermented Sausages).

Regarding claim 21, modified Robinson et al. disclose all of the claim limitations as set forth above. While Robinson discloses the use of starter cultures in the preparation of fermented sausages, Robinson does not disclose that starter cultures are required. Further, Robinson discloses that raw meat mixtures are naturally contaminated with microorganisms including *Lactobacillus* and *Micrococcus* species (p.745/Microbiology of Fermentation). Robinson discloses that species of *Lactobaccillus* including *L. sakei*, *L. plantarum*, *L. viridescens*, and *L.*

Art Unit: 1781

*curvatus* are present naturally and the dominant bacterial flora during fermentation (p.745/Desirable Flora).

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 5-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH GWARTNEY whose telephone number is (571)270-3874. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. G./

Examiner, Art Unit 1781

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1781